UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/534,659	11/09/2005	**Walter Lindner**	081542-000000US	7089

20350 7590 01/19/2011

KILPATRICK TOWNSEND & STOCKTON LLP
TWO EMBARCADERO CENTER
EIGHTH FLOOR
SAN FRANCISCO, CA 94111-3834

EXAMINER	
BELYAEV, YANA	
ART UNIT	**PAPER NUMBER**
1741	

MAIL DATE	DELIVERY MODE
01/19/2011	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/534,659	LINDNER, WALTER	
	Examiner	Art Unit	
	YANA BELYAEV	1741	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 December 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *33-35,37-39,41-46,65 and 66* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *33-35,37-39,41-46,65 and 66* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3 December 2010 has been entered.

Response to Arguments

1. Applicant's arguments filed 3 December 2012 have been fully considered but they are not persuasive.

The applicant argues that claim 1 now recites that the contour defining portion of the base part has centering function.

The examiner respectfully disagrees. None of the claims state that the base part has a centering function.

The applicant argues that Badin shows an upper part with a central pressing stamp, but the upper part surrounding the pressing stamp does not close the hollow space. Badin's upper part does not read on the claimed pressing stamp, which closes the hollow space of the base part and forms a tolerance compensating recess in the stopper. This feature is obtained by the claimed multi-part mold in which the middle part and the upper part - and not only the press stamp - define the outer contour of the stopper in substantial manner.

The examiner respectfully disagrees. According to the Oral Translation of Col. 5, lines 33-50 and Col. 6, lines 38-41 by certified translator, John Koytcheff, on January 7, 2011 at 11 am, there is no limitation that the upper part (shown directly above pins 9 and 10 in the Figure) does not touch the glass molded product. In fact, the pins 9 and 10 project out from the mold and can leave the mold in a frictionless manner. Therefore, it is interpreted by the examiner that the part of the upper mold, depicted as directly above the pins 9 and 10 in the Figure, does in fact come into contact with the glass product, as shown in the Figure.

The applicant argues that clearly, if the base element 8 of Badin were modified to include a plunger, along with elements 2 and 3 being modified into one piece, then Badin's mold would be rendered unsatisfactory for its intended purpose, which is to produce the shown swing-top cap used commonly in conjunction with bottling beer. The shown pins 9, 10 provide a passage for a wire to pass through the upper cylindrical portion for connection to a lock mechanism.

The examiner respectfully disagrees. The applicant does not provide any reason why if Badin's mold were modified to include a plunger, along with elements 2 and 3 being modified into one piece, then Badin's mold would be rendered unsatisfactory for its intended purpose. Furthermore, the applicant points out the pins 9 and 10 provide a passage for a wire to pass through the upper cylindrical portion, thus the upper cylindrical portion should be in contact with the glass product.

The applicant argues that Badin's stopper is clearly unusable with the claimed one part mold, as it would be impossible to remove the stopper without destroying the mold. Thus, applicant submits that one of ordinary skill in the art would recognize that the mold of Badin is structurally tailored for a type of stopper which inherently requires a different mold construction

than claimed. This is evident because this artisan knows that the structural requirements of the stopper define the mold, and not vice versa. Accordingly, the artisan would pass over Badin, because modifications to Badin's mold would essentially require the entire mold to be scrapped and redesigned. Thus, the differences between Badin's mold and the claimed subject matter are much too great for the artisan to view the claimed invention as an obvious derivation.

The examiner respectfully disagrees. A glass product is removed from Badin's mold without destroying the mold, therefore a glass stopper could also be removed from the mold without destroying the mold. Additionally, the applicant has no basis for stating that the differences between Badin's mold and the claimed subject matter are much too great for the artisan to view the claimed invention as an obvious derivation. The examiner describes below how after a few known modifications to Badin with respect to Rauh and Davey, would result in a combination that meets the claimed invention.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 33-35, 37-39, 41-45, and 65-66 are rejected under 35 U.S.C. 103(a) as being unpatentable over DE 19823515 (Badin hereinafter) in view of DE 19649030 (Rauh hereinafter) and further in view of US D519835 (Dubs hereinafter).

Regarding claims 33-35 and 65, Badin discloses a plant for the manufacture of glass stoppers provided with a head part for the closing of bottles (page 1, paragraph 3), comprising a multi-part mold (page 1, paragraph 12, "two tools") which determines, in the closed state, the negative contour of the stopper to be manufactured, a feeder system for supplying the mold with molten glass (page 3, paragraph 8, "feeder of an inlet gutter"), a multistation press (page 2, paragraph 11, "the machine covers two figuration stations) and an arrangement for the removal and for the further handling of the glass stoppers produced (paragraph 5, "conveyor belt"),

characterized in that, the mold is formed by a base part (Figure, element 8) having a cut-out (page 1, paragraph 11, "bottom end of mold") corresponding to a first part length of a stopper;

a middle part of two part elements (Figure, elements 2 and 3) of a mold which are in particular displaceable relative to one another and perpendicular to the longitudinal axis (page 1, paragraph 12, "vertical axis") of the mold, which can be coupled in a self-centering manner and which determine a hollow space corresponding to a second part length of a stopper and to at least a main region of the head part in the coupled state and in the state contacting the base part (page 3, paragraph 5, "hollow space");

and an upper part (Figure, element 4) having a central pressing stamp (Figure, element 5) axially displaceable relative to the upper part, said upper part and said central pressing stamp (Figure, element 5 and "seal lock") closing the hollow space of the head part for the forming of a tolerance compensating recess in the head part of the stopper (Figure, element 11).

Badin discloses that the hollow space determined by the part elements (Figure, elements 2 and 3) of the mold forming the middle part extends axially beyond the planar surface of the head part and bounds the head part at its outer periphery, on the one hand, and at a radially outwardly disposed marginal region of the planar surface, on the other hand.

Badin discloses that the upper part with a centrally guided pressing stamp closing the hollow space of the head part has a ring nose (end of element 5 closest to element 11) which engages in a shape-matched manner into the hollow space determined by the part elements of the mold, with the outer diameter of the ring nose being smaller than the outer diameter of the head part (Figure, element 5 and 11).

Badin does not disclose that the cut- out of the base part is bounded at the base side by a plunger having an ejection function and whose end face is smaller than the base surface of the cut-out; and in that the base is in particular made in one part.

Rauh discloses that the cut- out of the base part (Figures 4 and 5, element 9) is bounded at the base side by a plunger having an ejection function (page 6, claim 5, "ejector") and whose end face is smaller than the base surface of the cut-out (Figures 4 and 5, top of element 9); and in that the base is in particular made in one part (Figures 4 and 5, element 9).

It would have been obvious to one of ordinary skill in the art at the time of the invention to have combined the feeder system of Rauh with the mold disclosed by Badin since both Badin

and Rauh disclose a method of molding glass to make bottle stoppers (Badin, page 1, paragraph 1) and Rauh further discloses an efficient method and apparatus for forming glass (page 2, paragraphs 5 and 6), which includes all the steps from supplying liquid glass into an apparatus to molding the glass to removing the molded product from the mold (Rauh, claim 1).

Badin does not explicitly disclose that the upper part (Figure, element 4) of the mold forms a planar surface surrounding said tolerance compensating recess on the head part. However, Badin does teach that the press ram (element 5) and the portion of the upper mold (4, behind the protrusion of elements 9 and 10) is in contact with the glass (element 11).

Dubs, however, shows a depiction of a glass stopper with a planar edge around the center of the top (Figs. 3 and 4).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have combined the teachings of Badin with Dubs and make a small adjustment to the apparatus disclosed by Dubs such that the part of the upper mold that touches the glass stopper is flat, such that the surface of the formed stopper head edge is flat. This would have been an obvious modification of Badin in order to customize the glass molding machine disclosed by Badin to make glass stoppers, disclosed by Dubs.

Regarding claim 37, Badin discloses that the first part length of the stopper expands, preferably conically, starting from the base surface of the base part and ends at a position of discontinuity of the stopper diameter (Figure, element 11).

Regarding claim 38, Badin discloses that the part elements (Figure, elements 2 and 3) of the mold of the middle part, which can be coupled in a self-centering manner, form, on the one hand, the second part length of the stopper of in particular cylindrical shape and reduced

diameter extending from the position of discontinuity up to the head part (reduced diameter part of element 11).

Badin does not specifically disclose that the head part is preferably designed in disk shape over practically its total height.

However, Badin does disclose that the head part is used as a stopper for bottles, such as beer and soda bottles (page 1, paragraphs 1 and 3). Since bottle openings are round, and to be an effective stopper, the stopper must make a tight seal with the bottle opening. Thus the diameter of the stopper must be a disk shape over its total height.

Regarding claim 39, Badin discloses that, when the mold is closed, the dividing line between the upper part (Figure, element 4) of the mold and the part-elements (Figure, elements 2 and 3) of the mold forming the middle part of the mold is disposed beneath the planar surface (page 2, paragraph 4, "planar") of the stopper (Figure, element 11) in the region of the stopper rounding.

Regarding claim 41, Badin discloses that the diameter of the pressing stamp (Figure, element 5) is larger than the diameter of the second part length of the stopper (Figure, element 11, part between elements 2 &3).

Regarding claim 42, Badin discloses that the pressing stamp (Figure, element 5) is actuated in lagging manner with respect to the upper part (Figure, element 4) of the mold and a central compression spring, at least one pneumatic cylinder is/are fitted between the pressing stamp and the upper part (page 3, paragraph 6, "mechanical and/or pneumatic").

Regarding claim 43, Badin does not disclose that the plunger having an ejection function can be moved into a retraction position enlarging the mold depth during the feed process.

However, Rauh discloses a plunger having an ejection function (page 6, claim 5, "ejector").

While Rauh does not specifically state that the plunger can be moved into a retraction position enlarging the mold depth during the feed process, it is obvious that if the ejector is in the process of ejecting a glass gob from the mold, the available space in the mold would be smaller than if the ejector is not in the process of ejecting a glass gob from the mold.

Regarding claim 44, Badin does not discloses that with the mold upper part positioned with a lateral offset, the otherwise closed mold is fed by a feeder system designed for droplet operation with glass gobs which fall through the middle part of the mold without contact and whose diameter to length ratio is disposed in the range from approximately 1: 3.5 and whose length is preferably selected to be larger than the depth of the hollow space of the mold.

However, Rauh discloses that with the mold upper part positioned with a lateral offset (page 4, paragraph 1, "sliding mechanism…radially outward advanced"), the otherwise closed mold is fed by a feeder system designed for droplet operation with glass gobs (page 6, claim 4, parts (a) and (b)).

Rauh does not disclose that glass gobs which fall through the middle part of the mold without contact and whose diameter to length ratio is disposed in the range from approximately 1: 3.5 and whose length is preferably selected to be larger than the depth of the hollow space of the mold.

However, Rauh does disclose that glass drop is metered (page 4, paragraph 1, "metered glass drop "). Thus the size, shape, and amount of the glass drop is established as a result effective variable. It would have been obvious to one of ordinary skill in the art at the time of the

invention to have optimized the size, shape, and amount of the glass drop depending on the size and shape of the mold and viscosity of the particular glass (page 4, paragraph 1, "less deep into the molding..."). However, the optimization of a range or other variable within the claims that flows from the "normal desire of scientists or artisans to improve upon what is already generally known" is prima facie obvious. In re Peterson, 315 F.3d 1325, 1330 (Fed. Cir. 2003) (determining where in a disclosed set of percentage ranges the optimum combination of percentages lies is prima facie obvious). The discovery of an optimum value of a variable in a known process is usually obvious. In re Aller, 220 F.2d 454,456 (C.C.P.A. 1955).

It would have been obvious to one of ordinary skill in the art at the time of the invention to have combined the feeder system with the mold disclosed by Badin since both Badin and Rauh disclose a method of molding glass to make bottle stoppers (Badin, page 1, paragraph 1).

Regarding claim 45, Badin does not disclose that the station designed for the feeding of the mold with glass gobs is simultaneously made as a station for the carrying out of the pressing process.

However, Rauh discloses that the station designed for the feeding of the mold with glass gobs is simultaneously made as a station for the carrying out of the pressing process (page 5, claim 4, part (c)).

It would have been obvious to one of ordinary skill in the art at the time of the invention to have combined the feeder system with the mold disclosed by Badin since both Badin and Rauh disclose a method of molding glass to make bottle stoppers (Badin, page 1, paragraph 1).

Regarding claim 66, Badin teaches that the first part length of the stopper comprises a conical surface (element 11) laterally bound by the cut-out of the base part, the conical surface

beginning with a large diameter near a discontinuity where the cut-out of the base part (intersection of elements 2, 3, and 11), the conical surface beginning with a large diameter near a discontinuity where the cut-out of the base part transitions to the hollow space of the middle part (elements 6, 7, and 11), the conical surface ending with a small diameter near the base surface (diameter of element 11 at the side of element 8).

4. Claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over Badin in view of Rauh and further in view of Dubs as applied to claims 33-35, 37-39, 41-45, and 65-66 above, in view of US Patent 4,772,306 (Davey hereinafter).

Regarding claim 46, Badin does not discloses that a fall and guide channel is provided in the feed station for the supply of glass gobs in a centered manner with respect to the mold from a pre-settable drop height.

However, Davey discloses a glass gob delivery system which supplies glass gobs in a centered manner with respect to the mold (column 3, lines 16-18) and from a pre-settable drop height (column 4, lines 42-45), wherein since the height is different is interpreted by the examiner that the height can be pre-set.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have combined the teachings of Davey with the teachings of Badin since Badin discloses shaping glass gobs in a mold (Badin, abstract) and Davey discloses delivering glass gobs to a mold (Davey, abstract). Therefore the information disclosed by Davey complements what is taught by Badin.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to YANA BELYAEV whose telephone number is (571)270-7662. The examiner can normally be reached on M-Th 8:30am - 6pm; F 8:30 am- 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Daniels can be reached on (571) 272-2450. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Y. B./
Examiner, Art Unit 1741

/Matthew J. Daniels/
Supervisory Patent Examiner, Art Unit 1741